CLAIMS

What is claimed is:

1. Use of a biologically active agent in the manufacture of a medicament for treatment of a condition selected from the group consisting of insulin resistance syndrome and diabetes including Type I Diabetes and Type II Diabetes; or for the treatment or reduction in the chance of developing atherosclerosis, arteriosclerosis, obesity, hypertension, hyperlipidemia, fatty liver disease, nephropathy, neuropathy, retinopathy, foot ulceration or cataracts associated with diabetes; or for the treatment of a condition selected from the group consisting of hyperlipidemia, cachexia, and obesity; wherein the agent is a compound of the formula:

wherein

n is 1 or 2;

m is 2 or 3;

q is 0 or 1;

t is 0 or 1;

R² is alkyl having from 1 to 3 carbon atoms;

R³ is hydrogen, halo, alkyl having from 1 to 3 carbon atoms, or alkoxy having from 1 to 3 carbon atoms;

- A is phenyl, unsubstituted or substituted by 1 or 2 groups selected from: halo, alkyl having 1 or 2 carbon atoms, perfluoromethyl, alkoxy having 1 or 2 carbon atoms, and perfluoromethoxy; or cycloalkyl having from 3 to 6 ring carbon atoms wherein the cycloalkyl is unsubstituted or one or two ring carbons are independently mono-substituted by methyl or ethyl; or a 5 or 6 membered heteroaromatic ring having 1 or 2 ring heteroatoms selected from N, S and O and the heteroaromatic ring is covalently bound to the remainder of the compound of formula I by a ring carbon; and
- R¹ is hydrogen or alkyl having 1 or 2 carbon atoms;

or when R1 is hydrogen, a pharmaceutically acceptable salt of the compound.

- 2. The use of claim 1, wherein n is 1; q is 0; t is 0; R³ is hydrogen; and A is phenyl, unsubstituted or substituted by 1 or 2 groups selected from: halo, alkyl having 1 or 2 carbon atoms, perfluoromethyl, alkoxy having 1 or 2 carbon atoms, and perfluoromethoxy.
- 3. The use of claim 2, wherein A is 2,6-dimethylphenyl.
- 4. The use of claim 3, wherein the biologically active agent is selected from the group consisting of:
- 5-[3-(2,6-Dimethylbenzyloxy)-phenyl]-pent-4-enoic acid ethyl ester; and 6-[3-(2,6-Dimethylbenzyloxy)-phenyl]-hex-5-enoic acid ethyl ester.
- 5. The use of any one of claims 1 to 4, wherein the medicament is formulated for oral administration.

6. A method for treating a mammalian subject with a condition selected from the group consisting of insulin resistance syndrome, diabetes, hyperlipidemia, fatty liver disease, cachexia, obesity, atherosclerosis and arteriosclerosis comprising administering to the subject an amount of a biologically active agent, wherein the agent is a compound of the formula:

wherein

n is 1 or 2;

m is 2 or 3;

q is 0 or 1;

t is 0 or 1;

R² is alkyl having from 1 to 3 carbon atoms;

R³ is hydrogen, halo, alkyl having from 1 to 3 carbon atoms, or alkoxy having from 1 to 3 carbon atoms;

A is phenyl, unsubstituted or substituted by 1 or 2 groups selected from: halo, alkyl having 1 or 2 carbon atoms, perfluoromethyl, alkoxy having 1 or 2 carbon atoms, and perfluoromethoxy; or

cycloalkyl having from 3 to 6 ring carbon atoms wherein the cycloalkyl is unsubstituted or one or two ring carbons are independently mono-substituted by methyl or ethyl; or

a 5 or 6 membered heteroaromatic ring having 1 or 2 ring heteroatoms selected from N, S and O and the heteroaromatic ring is covalently bound to the remainder of the compound of formula I by a ring carbon; and

R¹ is hydrogen or alkyl having 1 or 2 carbon atoms;

or when R¹ is hydrogen, a pharmaceutically acceptable salt of the compound.

- 7. The method of claim 6, wherein n is 1; q is 0; t is 0; R³ is hydrogen; and A is phenyl, unsubstituted or substituted by 1 or 2 groups selected from: halo, alkyl having 1 or 2 carbon atoms, perfluoromethyl, alkoxy having 1 or 2 carbon atoms, and perfluoromethoxy.
- 8. The method of claim 7, wherein wherein A is 2,6-dimethylphenyl.
- 9. The method of claim 8, wherein the biologically active agent is selected from the group consisting of:
- 5-[3-(2,6-Dimethylbenzyloxy)-phenyl]-pent-4-enoic acid ethyl ester; and 6-[3-(2,6-Dimethylbenzyloxy)-phenyl]-hex-5-enoic acid ethyl ester.
- 10. The method of any one of claims 6 to 9, wherein the subject is a human.
- 11. The method of claim 10, wherein the agent is administered orally in an amount from one milligram to four hundred milligrams per day.
- 12. The method of any one of claims 6 to 11, wherein the condition is insulin resistance syndrome or Type II Diabetes.

13. The method of any one of claim 6 to 12, wherein the treatment reduces a symptom of diabetes or the chances of developing a symptom of diabetes, wherein the symptom is selected from the group consisting of: atherosclerosis, obesity, hypertension, hyperlipidemia, fatty liver disease, nephropathy, neuropathy, retinopathy, foot ulceration and cataracts, associated with diabetes.

14. A pharmaceutical composition for use in the treatment of a condition selected from the group consisting of insulin resistance syndrome, diabetes, hyperlipidemia, fatty liver disease, cachexia, obesity, atherosclerosis, arteriosclerosis and adapted for oral administration, comprising a pharmaceutically acceptable carrier and from one milligram to four hundred milligrams of a biologically active agent, wherein the agent is a compound of the formula:

wherein

- n is 1 or 2;
- m is 2 or 3;
- q is 0 or 1;
- t is 0 or 1;
- R² is alkyl having from 1 to 3 carbon atoms;

R³ is hydrogen, halo, alkyl having from 1 to 3 carbon atoms, or alkoxy having from 1 to 3 carbon atoms;

- A is phenyl, unsubstituted or substituted by 1 or 2 groups selected from: halo, alkyl having 1 or 2 carbon atoms, perfluoromethyl, alkoxy having 1 or 2 carbon atoms, and perfluoromethoxy; or cycloalkyl having from 3 to 6 ring carbon atoms wherein the cycloalkyl is unsubstituted or one or two ring carbons are independently mono-substituted by methyl or ethyl; or a 5 or 6 membered heteroaromatic ring having 1 or 2 ring heteroatoms selected from N, S and O and the heteroaromatic ring is covalently bound to the remainder of the compound of formula I by a ring carbon; and
- R¹ is hydrogen or alkyl having 1 or 2 carbon atoms;

or when R¹ is hydrogen, a pharmaceutically acceptable salt of the compound.

15. The pharmaceutical composition of claim 14, wherein n is 1; q is 0; t is 0; R^3 is hydrogen; and

A is phenyl, unsubstituted or substituted by 1 or 2 groups selected from: halo, alkyl having 1 or 2 carbon atoms, perfluoromethyl, alkoxy having 1 or 2 carbon atoms, and perfluoromethoxy.

- 16. The pharmaceutical composition of claim 15, wherein wherein A is 2,6-dimethylphenyl.
- 17. The pharmaceutical composition of claim 16, wherein the biologically active agent is selected from the group consisting of:
- 5-[3-(2,6-Dimethylbenzyloxy)-phenyl]-pent-4-enoic acid ethyl ester; and 6-[3-(2,6-Dimethylbenzyloxy)-phenyl]-hex-5-enoic acid ethyl ester.

- 18. The pharmaceutical composition of any one of claims 14 to 17 in oral dosage form.
- 19. A biologically active agent, wherein the agent is a compound of the formula:

wherein

n is 1 or 2;

m is 2 or 3;

q is 0 or 1;

t is 0 or 1;

R² is alkyl having from 1 to 3 carbon atoms;

R³ is hydrogen, halo, alkyl having from 1 to 3 carbon atoms, or alkoxy having from 1 to 3 carbon atoms;

A is phenyl, unsubstituted or substituted by 1 or 2 groups selected from: halo, alkyl having 1 or 2 carbon atoms, perfluoromethyl, alkoxy having 1 or 2 carbon atoms, and perfluoromethoxy; or cycloalkyl having from 3 to 6 ring carbon atoms wherein the cycloalkyl is unsubstituted or one or two ring carbons are independently mono-substituted by methyl or ethyl; or

cycloalkyl having from 3 to 6 ring carbon atoms wherein the cycloalkyl is unsubstituted or one or two ring carbons are independently mono-substituted by methyl or ethyl; or

a 5 or 6 membered heteroaromatic ring having 1 or 2 ring heteroatoms selected from N, S and O and the heteroaromatic ring is covalently bound to the remainder of the compound of formula I by a ring carbon; and

R¹ is hydrogen or alkyl having 1 or 2 carbon atoms;

or when R¹ is hydrogen, a pharmaceutically acceptable salt of the compound.

20. The biologically active agent of claim 19, wherein n is 1; q is 0; t is 0; R³ is hydrogen; and

A is phenyl, unsubstituted or substituted by 1 or 2 groups selected from: halo, alkyl having 1 or 2 carbon atoms, perfluoromethyl, alkoxy having 1 or 2 carbon atoms, and perfluoromethoxy.

- 21. The biologically active agent of claim 19, wherein wherein A is 2,6-dimethylphenyl.
- 22. The biologically active agent of claim 21, selected from the group consisting of: 5-[3-(2,6-Dimethylbenzyloxy)-phenyl]-pent-4-enoic acid ethyl ester; and 6-[3-(2,6-Dimethylbenzyloxy)-phenyl]-hex-5-enoic acid ethyl ester.
- 23. The invention substantially as described above.